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ABSTRACT

Characteristics of an effective peer tutoring program for exceptional children are reviewed, and program implementation models are described. Specification of outcomes, assessment of attainment of outcomes, monitoring of project implementation, and field testing or use of a pilot project are among the characteristics of an effective program noted. Three implementation models (Deterline's system approach, Cohen's readmap for tutoring, and Ehly's research model) are discussed. (CL)

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Dr. Stewart Ehly -- PEER TUTORIAL MODELS

Edited Transcript of Presentation at Council for Exceptional Children, April 15, 1977.

In thinking about what I was going to talk about in this session, I turned to several sources that I would like to share with you because I have found them to be very good sources. The first one is a book edited by Vernon Allen, called "Children as Teachers". It is put out by the Academic Press and is part of their educational psychology series. It focuses on research in tutoring - how it works and how it doesn't. I don't know if it has come through in our panel today but there hasn't been much research on tutoring - at least, research that shows it to be extremely effective. Most of the articles that appear in literature are of an anecdotal nature. I have two articles listed in my section - one appeared in the Elementary School Journal and one in Academic Therapy - Peer Tutoring and Individualized Instruction and Peer Tutoring in the Regular Classroom. Both of these articles go over some of the elements of peer tutoring but primarily talk about what has worked in the studies that I have done with Steve Larsen from the University of Texas at Austin. Federal agencies also have been publishing accounts of successful peer tutoring programs. Our VIPS Program, Volunteers in Public Schools in Fort Worth, is constantly receiving materials on tutoring programs around the nation.

Getting back to my topic - Peer Tutoring Models. There are several ways to conceptualize the tutoring process - not only what goes into it but what goes on during it and the outcomes of peer tutoring. I have divided my presentation into several sections. The first section is called, "Characteristics of an effective program". You have heard this discussed earlier but I will go over it again because it is so important to your program.

"Characteristics of an Effective Program". Primarily, I gathered this

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information from my work with Steve Larsen at the University of Texas in Austin and from studies in the literature. I have listed seven elements that are critical to an effective program:

1. The first one that I talk about is specifying outcomes - in other words, defining what you want to do with the program as a whole and with the children with whom you are working. When you are setting up a program, oftentimes, you have one particular goal in mind. We heard of a program that was developed to increase the Reading scores of children on a particular standardized test. The project director trained children to master the content of that one test. The program was successful in that students made large gains on a post-test. Other programs are more ambitious. A sixth-grade school came up with a problem. Students were gathered from all over the city - they were bussed in from many places. Their mathematical skills, in particular, varied widely. In working out ways to remediate academic deficiences, the staff decided to have some of the students who were good in math work with other same-age students on math concepts and math principles. Teachers implemented a semester-long program. It was very well-structured - staff had access to materials on mathematics' tutoring from around the country. As a result, they were able to get their program started quickly and to remediate math difficulties. One thing that the staff found to be particularly important to the program's success was structuring of the tutorial process. Staff did not allow much leeway in what the tutor gave to the learner or how it was given. I discovered that many studies, at least the research studies, found structuring of content to be very important. Other authors have said that structure is not quite as important. "We would rather have a tutor go in there and take a fresh approach and not concentrate too much on how to do things specifically." I think research does support the contention that the greater structure you have, the better you will effectively remediate the specific learning problems of your students.

2. The second element of an effective program would be assessment of the attainment level; in other words, how do you know you have reached the goals you set out to attain. In the first program we mentioned, the staff defined their outcomes as "for our school district a rise of ten points on this test would mean that we attained our goal." As an additional example, you could set up a ten-week unit of materials on mathematical concepts and at the end of that period, you could test students on those specific concepts. That could be your evidence of attainment. Other programs are more ambitious. They look for spread of effect - in other words, they look for learning that occurs during tutoring to transfer to the regular classroom program. Unfortunately, the research on this has not supported spread of effect from peer tutoring. I am not aware of all of the literature, but what I have seen come through on many of these studies is that there is very little carry-over into other academic areas. For example, if you have a tutorial program in Spelling, you can expect that the child would be a better speller, not necessarily a better reader. In one of my studies in Austin, I did find some carry-over in a tutorial program in Spelling in which a child had to master a 200-word Spelling list. When students had completed the project, we did a test for generalization of Spelling ability. Students did exhibit increased ability in spelling new words.

3. The third step in the characteristics of an effective program is "Specifying materials and procedures." This is influenced by the structure of your tutorial program. If you are getting your program started and you are the only teacher who is interested in starting a program or has the time to devote to it, you are not going to have a lot of time to develop materials, to specify procedures, and so forth. However, when you have more than one teacher who is interested in developing a program and you have administrative support for the program, you are going to find that getting your materials and procedures together isn't going to be very difficult. The more you can develop your materials ahead

of time and specify how these materials will be used, the better your program will be. Some educators believe differently. In certain programs, the tutors have been given the responsibility for developing the tutorial materials and for structuring the tutoring sessions. In other words, tutors are told, "Here's Johnny and he is a little low in Reading so see what you can do to help him be a better reader." Amazingly, this can work. However, on a school-wide basis, or even a classroom basis, this often is not going to work because you are not going to find enough children who have the ability to be natural or good teachers, to handle materials and to know how to relate to the child who is going to be tutored. It becomes very important to develop the materials which will be used.

4. The fourth characteristic of an effective program is training tutors. This is a very important part of your tutorial program -- especially, if the program is going to involve more than a few children or more than one classroom. In one study, we had one three-hour session training program on the use of materials and the use of specific procedures. Training was important in this situation because it was a research study. We wanted certain things to happen under certain specifiable conditions. With this limitation, it became important for us to make sure that all our tutors were doing things identically. Even for a program that does not have research ambitions, I would still argue that training tutors in procedures and use of materials is going to produce more effective tutors. They are going to effectively use materials, they are going to know when to inform you when they need new materials, or when they need guidance on how to work with their student. One thing that is important in any training process is informing your children of the basics of relating to other children. From my observations of children, I do not expect a child to go into a new situation such as tutoring and to be at ease immediately. Often, tutoring is new to both tutor and learner. If a child is not given a lot of guidance on how to handle the situation, he or she is not likely

to do a very good job. The more you can teach your children on the use of materials and procedures, how to talk to other children, how to get them to be at ease in a tutoring situation, the more likely your tutors will enjoy themselves and perform well in their role. One of the benefits that people attribute to peer tutoring is that children teaching other children enables the learner to relax more, to be more open to the materials introduced. For this to occur, both of the children have to be relaxed and comfortable with each other. You may know all the children who are in your tutorial program. You may decide that certain children will work well with other children. Giving your children basic interpersonal skill training ahead of time will allow them to go into the tutorial situation and be comfortable.

5. The fifth characteristic is the monitoring of project implementation. Monitoring lets you k ow whether your children are using the materials that they are scheduled to use and whether tutors are using the procedures that they are trained to use. Monitoring allows you to assess both tutor and learner "fit" into the program. It is important to know that everything you have set up ahead of time is occurring and the program is running smoothly. For example, we just talked about pairing tutor and learner. Monitoring lets you know how well the children work together. You might discover that they hate each other and are not working together effectively. One of the programs in which I was involved did a pre-tutorial assessment on how the children felt about other students in their class and how they liked their potential tutorial partner. Even though we did not use this information to match our children, I can see that such information could be useful.

6. The sixth characteristic refers specifically to larger scale projects. Field testing of program components or use of a pilot project can be useful for situations in which you have hunches about what is going on in tutoring and you want to create a tutoring program that will allow you to verify these hunches.

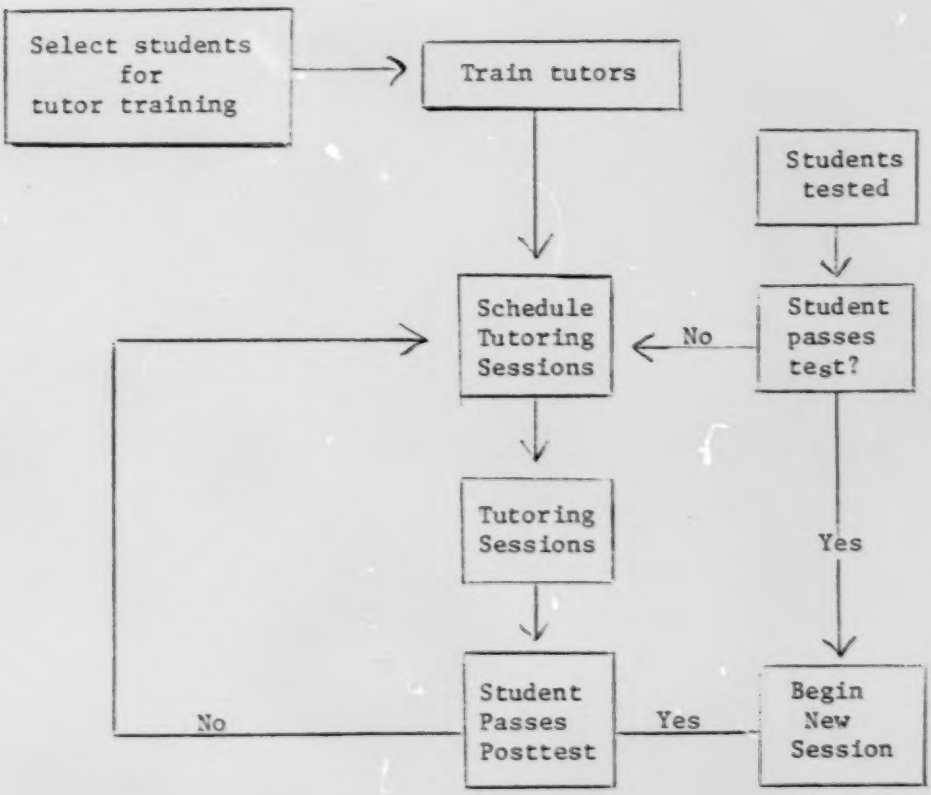
One method of doing this is by setting up a small scale pilot project. The purpose of this project is to gather information on materials or methods that are either workable or not workable with your children. For example, you might decide to switch textbooks in a particular situation. You might try that switch with a few children to see how they react to the books and how they learn with the new materials.

7. The seventh characteristic is very important to school administrators for it involves time and cost considerations. Time and cost figures can vary widely and depend on the goals of your program. If you want to have an effective program, one that will work for a majority of the children who are involved, you are going to have to devote a fair amount of time to setting up all aspects of the program in advance. One very efficient way of doing this is involving other school staff in the project. For example, several teachers can work on a project. In a cross-age program, the teachers of the classroom from which you are taking tutors and the teachers of the classroom containing the learners can work together on program design and scheduling. The more you set up things ahead of time, the easier program implementation will be. When the six previous characteristics of an effective program are occurring as planned, you will find less and less need to devote time to redesigning your tutorial program. The program will run by itself after awhile. In any tutorial program that has more than a few children involved, it is helpful to designate someone in the school as director or administrator of the program. This person can be responsible for coordinating what is going on in the project. This person can be given the responsibility of selecting children who will be the tutors and designating the children who will be the learners. The coordinator can be responsible for organizing the efforts of the teachers in affected classrooms and planning for the future with these teachers' cooperation.

MODELS FOR IMPLEMENTATION:

There are several approaches to conceptualizing this peer tutoring process. The first is called Deterline's "system approach". It is a flow chart of some steps that you go through in a tutorial program. This chart can be modified to reflect any of a number of options in a tutorial program.

FIGURE I - Deterline's "system approach"



Cohen's "Roadmap of Tutoring" is an interesting chart that he developed to outline crucial variables in any tutorial relationship. He specified tutor variables and the learner variables. These are presented in Figure II.

FIGURE II - "Roadmap for Tutoring"

a. Tutor variables

1. Tutor brings repertoire of ideas and activities designed to help learner in specific areas
2. Tutor develops a personal relationship with learner, based on concern and respect for learner
3. Tutor uses various techniques, such as questioning and reinforcement, to diagnose problems and to encourage new learning
4. Tutor employs variety of materials, designed both to develop interest and to enrich the learning experience

b. Learner variables

1. Learner brings a background of interests and abilities and a particular set of learning problems
2. Learner experiences a non-threatening situation and a sense of self-respect and confidence
3. Learner uses his past successes in learning as basis for mastering material in new and more difficult areas
4. Learner learns new materials in the context of own interests and abilities

The goal -- meaningful learning.

The second learner variable ties in with my suggestion that you emphasize the interpersonal skills that will be needed by the tutor in working with his partner. The tutor must be sensitive to both academic and affective needs of the learner. Teach your tutors to cue on emotional signs that signal a learner's state of mind.

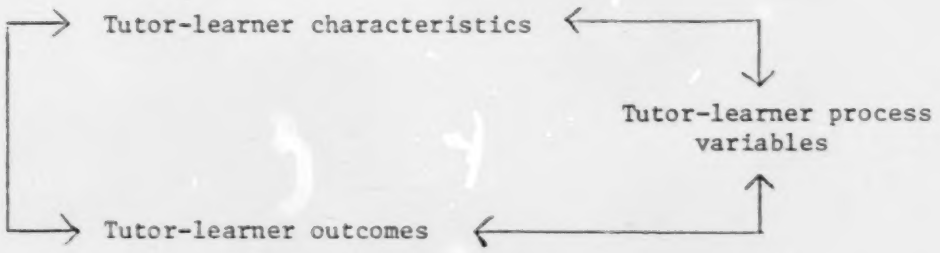
Cohen's third learner variable suggests working on a learner's strengths rather than weaknesses.

One thing we have not discussed yet is the tutoring of exceptional children. There have been surprisingly few articles on peer tutorials with exceptional children. The tutorial projects that I have seen with mentally retarded students have focused on self-care training in which students are assigned to help each other in obtaining certain self-care skills. Projects for children labeled "learning disabled" have been mentioned in the literature. Students have been given the responsibility of teaching their classmates particular academic skills.

I believe that any child, whether or not this child is labeled exceptional or comes from the regular classroom, can benefit from peer tutoring.

The next model resulted from my doctoral work.

FIGURE III - Ehly's Research Model



What I did in this project was look at student characteristics that may affect tutoring process. Student characteristics that were investigated included sex of the tutorial partner, liking for partner, and peer status of the partners. I also looked at the learner's pre-tutorial ability in the tutorial area, which in this case was spelling. Product outcomes were learning of materials and the efficiency of learning those materials. I did find that of all the tutor-learner characteristics that were investigated, only one influenced the outcome of the tutoring. This one was the child's pre-tutorial spelling ability. The child enters tutoring with a certain amount of spelling ability which correlates to some extent with the child's performance after tutoring. All students learned from tutoring but there weren't any changes in the ranking of students according to their abilities in spelling. I also looked at how students felt about each other in terms of their cognitive abilities and their affective abilities during the tutoring session. The data indicate that while process factors could be tapped, these factors did not influence outcomes of the tutoring. Characteristics of the tutor and learner did affect what was going on in the tutoring. The effects, however, were complicated but did support the need to investigate further process factors in tutorial settings.

Let's talk about considerations in setting up a tutoring program from the ground up. I have mentioned the need for administrative support. All of you have a favorite principal who doesn't give you anything without your begging for it. Administrative support is a problem with many projects. In reading about programs across the country, this factor seems to be the biggest hurdle to overcome in starting your program. When you cannot get your administrator, the principal at your local school, or even the back-up administrative people to help you, you are going to have a lot of trouble getting a tutorial program started. Other considerations, such as structural materials and arrangements, are fairly important because you need some space within your classroom to have your tutoring. If you cannot find space within your classroom, you are going to have to go out of the classroom. That is where administrative support becomes important. I cannot give you a "sure-fire" method of achieving support, but I do suggest that you somehow involve your administrators from the very beginning in developing your program. If you are interested in setting up a research project, you will need to seek resources within your school district which are available to help you set up the research model. It will save a great deal of confusion on data collection and analysis.

I talked about structural arrangements earlier. Almost any place in the school that can be set aside is a good area for tutoring. I'm aware of tutoring that has occurred in closets. Other schools permit use of the cafeteria for a program. In classrooms, teachers have taped off little areas of the floor so that the tutor and learner could work in a definite tutoring space. On the subject of time arrangements, I urge people who are initiating tutorial projects to have a schedule worked out ahead of time so that tutor and learner know exactly where they are to meet and when they are to meet. The more you can insist on students

abiding by their schedules, the more likely you will be that the learner and tutor will be comfortable with the tutorial arrangement.

Teachers helping each other is an important aspect of a tutorial program. If you are interested in starting a project, go out in the school and find who else is interested in working on the project. If you can find colleagues who want such a project, it will be a lot easier to convince your administrator to allot the time, space, and materials to support the project. Once you have this commitment, the next step is to designate someone to be responsible for coordinating the program. The program will be more likely to succeed when teachers help others so that children can help each other.

55TH ANNUAL INTERNATIONAL CONVENTION OF THE COUNCIL FOR THE EXCEPTIONAL CHILD

April 15, 1977

Session 377 Title: Peer Tutoring with the Exceptional Child: A Guide to Individualized Instruction

Paper Title: A Peer Tutoring Model

Participant: Dr. Stewart W. Ehly, Psychologist/Coordinator, Fort Worth Independent School District, Fort Worth, Texas 76107

I. Introduction: Children helping children (emphasis on ongoing projects, such as Fort Worth's Education in Living Program)

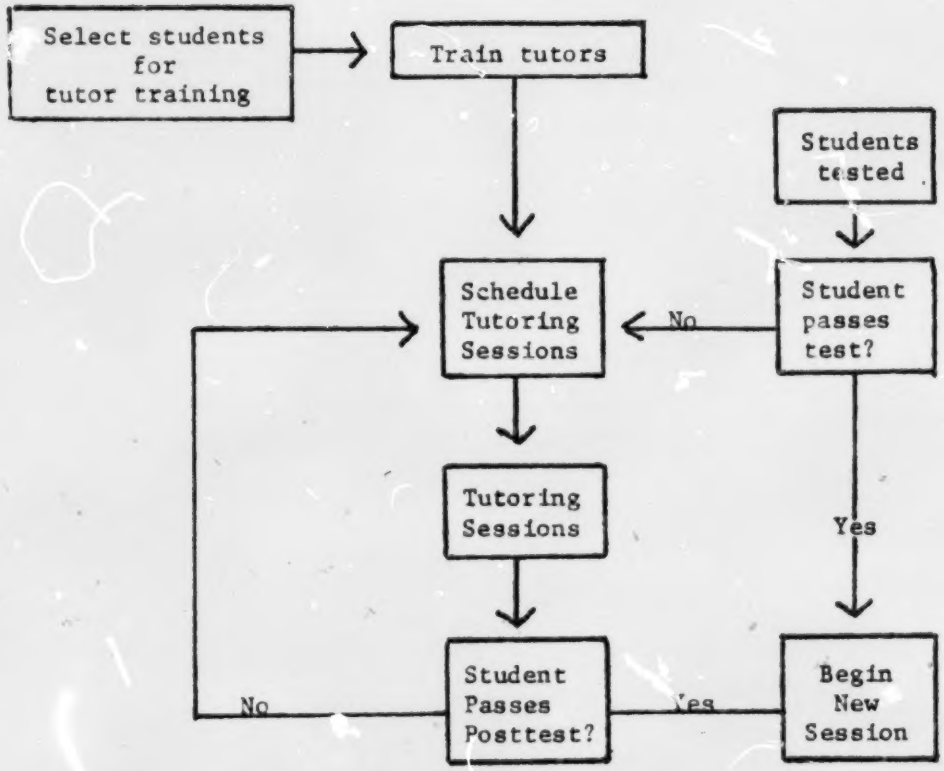
II. Tutorial models:

a. Characteristics of an effective program

1. Specification of outcomes
2. Assessment of attainment of outcomes
3. Specification of materials and procedures
4. Training of tutors
5. Monitoring of project implementation
6. Field testing of project or use of a pilot project
7. Time and cost considerations

b. A model for implementation - Deterline's "system approach" modified

1.



2. Cohen et al's "Roadmap for tutoring"

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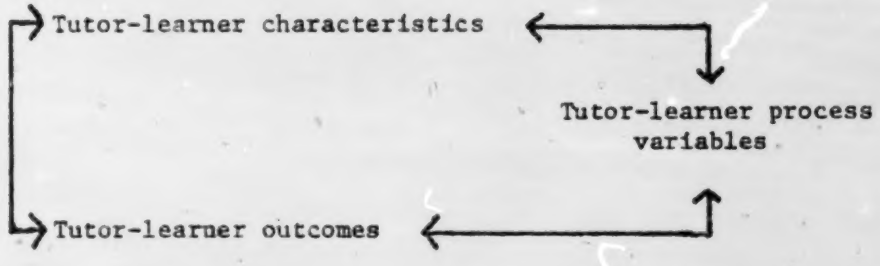
The goal -- meaningful learning!

3. Ehly's research model



III. Setting up a tutoring program from the ground up - some considerations

a. Administrative support
b. Structural and materials arrangement
c. Selecting tutors
d. Selecting learners
e. Pairing
f. Training tutors
g. Evaluation of outcomes
h. Other topics as time permits

1. Cross-age versus peer programs
2. Creative use of school space
3. Teachers helping each other!

For more information on peer tutoring and the Education in Living Program, write me as follows:

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3210 West Lancaster
Fort Worth, Texas 76107

Mini-bibliography

Ehly and Larsen, Peer tutoring to individualize instruction. Elementary School Journal, 1976, 76, 475-480.

Ehly and Larsen, Peer tutoring in the regular classroom. Academic Therapy, 1976, 11, 205-208.

NOTES: